



Defined STEM

2015-2016 Scale-Up Program

Overview: Defined STEM is a web-based content resource that provides educators with real-world based performance and literacy tasks built around a central career theme.

Grade Levels: K-12

Program Summary

Defined STEM is a K-12, subscription-based web service available to all students, educators, and parents throughout Iowa and can be used in multiple learning environments. Defined STEM is designed to support STEM education and follows four core principles: relevance, rigor, application, and understanding.

Defined STEM contains video resources designed to motivate students by contextualizing STEM skills in an array of professional career applications.

Performance tasks are built from the “Understanding By Design” framework and present a real-world problem within the context of a career/industry. Students are instructed to complete 1+ culminating activities based on the task’s “Goal”.

Defined STEM's literacy tasks are designed for alignment with the Common Core English Language Arts Standards to promote high-quality student assignments that develop reading, writing, and thinking skills in a cross-curricular fashion.

Finally, by aligning all Defined STEM tasks to the state, Common Core, and Next-Gen Science Standards, Defined Learning's project-based learning platform provides an environment for differentiating learning for a wide range of student abilities.

Project Description/Objectives

- Integrate STEM education across all subject areas for all K-12 students;
- Bring career relevance into the classroom through real world videos depicting how various jobs use STEM;
- Infuse project based learning and authentic assessment into the curriculum;
- Solve real world problems with the use of cross curricular learning with a focus on 21st century skills;
- And, infuse real world STEM career based non-fiction reading writing into the curriculum.

What does the project provide?

Defined STEM is a web-based resource that is available to applicants 24 hours a day 7 days a week. Each applicant will also receive the following:

- Customer and technical support between the hours of 9 to 5 Monday through Friday;
- Access to the unfacilitated online professional development course for Defined STEM.
- And, unlimited number of facilitated professional development webinars hosted by Defined STEM staff, covering the following topics:
 - Standards-based instruction;
 - 21st Century teaching and learning;
 - Rigor/relevance framework;
 - Multiple intelligences;
 - Differentiated instruction;
 - Webb's depth of knowledge;
 - New Bloom's Taxonomy;
 - Performance assessment;
 - Understanding by Design;
 - Analytical rubrics;
 - Integration of technology tools;
 - And, Authentic assessment.

What is required by the applicant in order to implement this program?

Defined STEM is a web-based resource that can be accessed from any computer, tablet, or phone that is connected to the Internet. A school or other organization will have to have the ability to access www.definedstem.com by an Internet connected device.

Defined STEM will not reimburse any participant to attend a professional development session. All participants are responsible for their travel-related costs and any other costs associated with attending the professional development session.

Website to View Program and Standards Alignment: <http://definedstem.com/standardgrid.cfm> (user name is iastem and password iastem)
Program Video: <http://definedstem.com/home/learn-more.cfm>